



MATERIAL SAFETY DATA SHEET

TRIOCIDE[®] 525 EC

ASTRA INDUSTRIAL COMPLEX CO., LTD. (ASTRACHEM)
P.O. Box 30447, AL-KHOBAR 31952
KINGDOM OF SAUDI ARABIA

1. CHEMICAL IDENTIFICATION

Product Name: **TRIOCIDE[®] 525EC**

Chemical Class: Aryloxyalkanoic acid

Use: Triocide[®] 525EC is used for post-emergence control of broad-leaved weeds

Producer: **Astra Industrial Complex Co., Ltd.**
P.O. Box 30447, Al-Khobar 31952
Kingdom of Saudi Arabia
Emergency Tel # (+966) 3 8121 406

2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance	Proportions (% w/w)	Chemical structure
Mecoprop CAS No. 7085-19-0 Chemical name: (RS)-2-(4-chloro-o-tolyloxy) propionic acid EC Hazard Xn, R22, Xi, R38, R41, R20/21/22. S2, S13, S20/21, S26, S46.	55.30	
Bromoxynil CAS No. 1689-99-2 Chemical name: 2,6-dibromo-4-cyanophenyl Octanoate EC Hazard R63, Xn, R21/22	7.26	
loxynil CAS No. 3861-47-0 Chemical name: 4-cyano-2,6-di-iodophenyl Octanoate EC Hazard R63, Xn, R22	7.15	
Blend of anionic and nonionic surfactants	6.54	
Organic Solvent	23.,75	



EC Hazard:

Xn:	Harmful
R22	Harmful if swallowed
Xi:	Irritant
R38	Irritating to skin
R63:	Possible risk of harm to the unborn child.
R41	Risk of serious damage to eyes
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
S2	Keep out of reach of children
S13:	Keep away from food, drink and animal feeding stuffs.
S20/21:	when using do not eat, drink or smoke.
S26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S46:	if swallowed, seek medical advice immediately and show this container or label.

3. HAZARD IDENTIFICATION

Harmful if swallowed
Irritating to skin
Risk of serious damage to eyes

Signs of Poisoning:

Symptoms of acute over exposure include headaches, fatigue, nausea and vomiting from solvent.

Effects of Single Exposures:

Ingestion:

The active ingredient presents a hazard whilst excessive prolonged exposure may cause chronic effects.

Eye:

Prolonged contact of the eye with the concentrate may cause irritation.

Skin:

The concentrate may irritate the skin. Prolonged or repeated exposure to the solvent may cause deflate of the skin which could lead to secondary dermatitis.

Inhaled:

A moderate hazard when handling the concentrate, but care should be taken to avoid inhalation of spray mists.



Chronic Effect:

Chronic over Exposure: Weight loss and damage to liver and kidneys may be expected if exposure is excessive over a period of time.

4. FIRST AID MEASURES

FIRST AID

Swallowed:

Do not induce vomiting. Rinse mouth with water. Keep patient warm and rested. Seek medical attention immediately.

If swallowed, and if more than ten minutes away from a hospital, induce vomiting, vomiting should be supervised by a physician.

Eye:

Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Get medical attention.

Skin:

Remove contaminated clothing and launder before re-use. Wash affected area thoroughly with soap and water. Seek medical attention.

Inhaled:

Remove patient to fresh air until recovered. Give artificial resuscitation if breathing has stopped. Seek medical attention immediately.

First Aid Facilities

Advice to Doctor:

Following ingestion, there is burning of the oral mucosa, hyper salivation, stomach cramps, vomiting & diarrhea. Other reported symptoms include convulsions, cerebral depression and mental confusion, with difficulty in speaking. A short period of myotonia is followed by muscular weakness, a general reduction in motor activity, ataxia and in co ordination and gradual loss of reflexes. In severe cases coma may develop, followed by death. The pulse may be rapid and sometimes irregular with a low blood pressure. Ventricular fibrillation has been reported.

Kidney & liver damage have been reported in animal experiments but not so far in man.

The only known cases of Phenoxyacid poisoning are those from deliberate ingestion and no poisoning arising occupationally has ever been verified.

No antidote is available and treatment should be symptomatic. Gastric lavage with medical charcoal in water is recommended.

5. FIRE FIGHTING MEASURES

Suitable Extinguisher:

Water – Take measures to avoid water entering drains or water courses.



Carbon dioxide.
Alcohol resistant foam.
Dry powder

Unsuitable Extinguisher:

None known

Special Exposure Hazards:

Dangerous, Toxic fumes may be given off (HCl, Cl₂, CO)

Protective equipment:

Proactive equipment and breathing apparatus

Fire and Explosion:

Flammable

Flash point : >35 C

Thermal decomposition products may include, but not limited to, toxic fumes of hydrogen bromide, hydrogen cyanide or other compounds of bromine and nitrogen if involved in fires or exposed to extreme heat.

Fire Fighting Measures:

In case of fire use dry chemical, foam or CO₂ extinguishing media. Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personnel Precautions:

Avoid contact with skin, wear personnel protective equipment.

Environmental Precautions:

Do not allow to enter drains or water courses. Advice relevant authorities in case of contamination of public waters.

Methods of Cleaning:

Collect contaminated material in heavy duty plastic bags or drums. Dispose of through a reputable waste disposal contractor.

Inform the local water Service Company and national Rivers Authority immediately if spillage enters drains or water courses.

Spill or Leak:

In case of spill or leak cover the spill with an absorbent (non-combustible material such as sand or earth) for disposal. Wash the spill area with water containing detergent and flush with water and remove any residues. Prevent spilled material from entering drains waterways and sewers.



7. HANDLING AND STORAGE

Store the product in original tightly closed containers in a well-ventilated, secure area out of reach of children and domestic animals. Do not use or store near heat or open flame. Do not store food or feed in storage area. Prevent eating, drinking or smoking in areas where there is a potential exposure to the product. Wash hands before eating, drinking or smoking after using the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Take Measures to Prevent:

Avoid contact with skin, eyes and clothing. Avoid dust formation.

Exposure Control Limits & Sources:

This chemical has not been assigned an occupational exposure standard (OES) in EH/40. It is recommended that exposure levels of 10 mg/m³ (8 hour TWA reference period) and 20 mg/m³ (10 minute reference period) are used for this material which are those assigned to a similar chemical.

Concentrations at or above these levels are defined as substantial concentrations and therefore substances hazardous to health within the meaning of regulation 2(1) in the COSHH regulations.

Exposure Standards:

No exposure standards have been set for this product. The manufacturer of the solvent has recommended a TLV of 100 ppm for the solvent. Natural ventilation only is required under normal circumstances of use.

Engineering Controls:

Local exhaust should be provided if material is handled in confined spaces to minimize exposure to solvent vapors.

Personnel Protection:

May irritate the eye and skin. Avoid contact with eyes and skin. DO NOT inhale spray mist. When preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and face shield. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear Yellow Liquid free of visible impurities
Water Content	<5.0 g/Kg
Density	1.0167 – 1.1367 Kg/L
Flash Point	>35 C



Acidity as H₂SO₄ < 5.0 g/Kg

10. STABILITY AND REACTIVITY

Reactivity:

Stability: Stable under normal conditions.
Conditions to avoid: Exposure to strong oxidizers. Avoid contact with chlorine and in organic Peroxides
Hazardous Polymerization Will not occur
Materials to avoid: Corrosive to iron and aluminium.
Hazardous Decomposition products: HCl, Cl₂, CO may be developing with heating.

11. TOXICOLOGICAL INFORMATION

Active ingredients:

Mecoprop Technical:

Acute oral LD₅₀ (rats) 930-1166 mg/Kg
Acute dermal LD₅₀ >4000 mg/Kg

Bromoxynil Octanoate:

Acute oral LD₅₀ (rats) 365 mg/Kg
Acute dermal LD₅₀ >2000 mg/Kg

Ioxynil Octanoate:

Acute oral LD₅₀ (rats) 190 mg/Kg
Acute dermal LD₅₀ >912 mg/Kg

12. ECOLOGICAL INFORMATION

Dangerous to fish and other aquatic life. Do not contaminate surface water or ditches with this product or used containers. Not toxic to bees.

Biological Degradability:

Readily biodegradable according to the appropriate OECD test DT₅₀ 8 – 14 days.

Field data

No bioaccumulation.

Bees Toxicity:

Not Toxic to Bees

The Acceptable Daily Intake (ADI) of **Bromoxynil** for a human is 0.003mg/Kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.3 mg/Kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species.



13. DISPOSAL CONSIDERATION

Pesticide wastes are toxic. Do not reuse product containers. Dispose of product containers, waste containers and residues according to local health and environmental regulations.

Safe Handling of Residues / waste:

Dispose of safely in accordance with the control of Pollution Act, 1974 and regulations made there under.

14. TRANSPORT INFORMATION

UN. No:	UN 2903		
Proper Shipping name:	Pesticide, Liquid , toxic, Flammable, N.O.S, flash point $\geq 23^{\circ}\text{C}$ (Mecoprop + Bromoxynil Octanoate + Ioxynil Octanoate)		
Class:	6.1		
Classification Code:	TF2		
Packing group:	III		
Subsidiary Risks:	6.1 +3		
Special provisions:	61		
Limited quantities:	LQ19		
Packaging:	Packing instructions	P001 IBC03 R001	
	Special packing provisions		
	Mixed Packaging Provisions	MP15	
	Instructions	T7	
UN Portable tanks:	Special Provisions	TP2	
	Tank Code	L4BH	
ADR Tank:	Special Provision	TU15 TE1 TE15 TE19	
	Vehicle for tank carriage	FL	
	Transport Category	2	
Special provision carriage:	Packages		
	Bulk		
	Loading, unloading & Handling Operation	CV13 CV28 S2 S9	
Hazard Identification	63		



15. REGULATORY INFORMATION

Toxicity Class WHO (a.i) II

EPA (formulation) II

Label info: Classification according to EEC directives.

16. OTHER INFORMATION

Buyer assumes all responsibility for safety and use not in accordance with the product label instructions.